

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 1, 8-10, 17, 24, and 25 and CANCEL claims 22 and 23 in accordance with the following:

1. (currently amended) An apparatus for dynamically determining a flow by means of an action chain in event processing performed in a distributed system, the apparatus comprising:

an action/attribute storage unit for storing information regarding actions to be executed upon receipt of ~~an~~ a first event object, ~~separated from a server object~~; and

a flow control unit for selecting an actions action to be ignited from the actions stored in the action/attribute storage unit in accordance with a type of the received first event object and creating a message that is an action execution request in which the address of the flow control unit is designated as a transmission destination address,

wherein when receiving ~~another~~ a second event object as the result of execution of the selected action, the flow control unit selects another actions action to be ignited next and executed from the actions in the action/attribute storage in accordance with a type of the newly received second event object so as to dynamically realize a chain of actions.

2. (previously presented) A dynamic flow determination apparatus according to claim 1, wherein the action/attribute storage unit stores a definition of an action which is executed upon reception of an event object separately from a definition of an input pattern which serves as a condition under which the action is selected,

whereby behavior for an event is changed through modification of the definition of the input pattern without necessity of changing the definition or configuration of the action.

3. (cancelled)

4. (previously presented) A dynamic flow determination apparatus according to claim 2, wherein the value of the event object or the attribute values of the event object is included in the

definition of the input pattern stored in the action/attribute storage unit, whereby ignition of each action is controlled on the basis of the definition of the input pattern.

5. (previously presented) A dynamic flow determination apparatus according to claim 2, wherein the name of an action which is expected to be executed immediately before another action is included in the definition of the input pattern stored in the action/attribute storage unit; and

the flow control unit checks the definition of the input pattern before selection of actions to thereby control the order of actions to be executed.

6. (previously presented) A dynamic flow determination apparatus according to claim 1, wherein:

the flow control unit stores a list of actions already executed, when the flow control unit selects actions and

the flow control unit excludes an action or actions which have been executed from actions to be ignited to thereby prevent the flow from forming an endless loop.

7. (previously presented) An apparatus for dynamically determining a flow by means of an action chain in event processing performed in a distributed system, the apparatus comprising:

an action/attribute storage unit for storing definition information regarding actions;

a message reception unit for receiving a message;

a message transmission unit for transmitting a message;

an action management unit for changing definition information regarding an action when the received message is a request for changing the definition information regarding the action;

a pattern match processing unit for comparing the contents of a parameter of a message which is received as an action execution request with information stored in the action/attribute storage unit in order to select matched actions;

an action execution unit for managing execution of the selected action; and

a flow control unit, which is started by the action execution unit upon receipt of an event object, for selecting actions to be executed next in accordance with a type of the received event object and for creating a message that is an action execution request in which the address of the flow control unit is designated as a transmission destination address,

whereby the flow control unit repeats selecting an action to be executed next in accordance with a type of the received event object.

8. (currently amended) A method for dynamically determining a flow by means of an action chain in event processing performed in a distributed system, the method comprising:
receiving a message that is an action execution request from an agent;
checking whether ~~an~~ the action execution request has a name designated by a parameter designating an action in an action/attribute storage unit which stores information regarding actions to be executed upon receipt of an event object, ~~separated from a server object~~; and
executing the designated action when the action is present in the action/attribute storage unit,

otherwise selecting ~~actions~~ an action to be ignited from the actions stored in the action/attribute storage unit in accordance with a type of ~~the~~ a received first event object; wherein, creating a message that is an action execution request in which the address of the received message is designated as a transmission destination address, and, when receiving another a second event object as the result of execution of the selected action, repeating the execution of the action and selection of ~~actions~~ an action to be ignited in accordance with a type of the newly received event object so as to dynamically realize a chain of actions.

9. (currently amended) A computer readable medium storing a program to operate an apparatus for dynamically determining a flow by means of an action chain in event processing performed in a distributed system, the program causing the apparatus to perform a method comprising:

receiving a message;
transmitting a message;
changing definition information regarding an action when the received message is a request for changing the definition information regarding the action;
comparing the contents of a parameter of a message which is received as an action execution request with a pattern for selection of an action in order to select matched actions;
managing execution of the selected action; and
upon receipt of ~~an~~ a first event object, selecting ~~actions~~ an action to be executed next in accordance with a type of the received first event object ~~to execute the selected action and creating a message that is an action execution request in which the address of the received message is designated as a transmission destination address,~~
wherein the processing for selecting an action to be executed next in accordance with a

type of the received event object is repeated when receiving a second event object so as to dynamically realize a chain of actions.

10. (currently amended) An apparatus for dynamically determining a flow by means of an action chain in event processing performed in a distributed system, the apparatus comprising:
action/attribute storage means for storing information regarding actions to be executed upon receipt of an a first event object, separated from a server object; and

flow control means for selecting actions an action to be ignited from the actions stored in the action/attribute storage means in accordance with a type of the received first event object and creating a message that is an action execution request in which the address of the flow control unit is designated as a transmission destination address,

wherein when receiving another a second event object as the result of execution of the selected action, the flow control means selects another actions action to be ignited next and executed from the actions in the action/attribute storage in accordance with a type of the newly received second event object so as to dynamically realize a chain of actions.

11. (previously presented) A dynamic flow determination apparatus according to claim 10, wherein the action/attribute storage means stores a definition of an action which is executed upon reception of an event object separately from a definition of an input pattern which serves as a condition under which the action is selected,

whereby behavior for an event is changed through modification of the definition of the input pattern without necessity of changing the definition or configuration of the action.

12. (cancelled)

13. (previously presented) A dynamic flow determination apparatus according to claim 11, wherein the value of the event object or the attribute values of the event object is included in the definition of the input pattern stored in the action/attribute storage means, whereby ignition of each action is controlled on the basis of the definition of the input pattern.

14. (previously presented) A dynamic flow determination apparatus according to claim 11, wherein the name of an action which is expected to be executed immediately before another action is included in the definition of the input pattern stored in the action/attribute storage means; and

the flow control means checks the definition before selection of actions to thereby control the order of actions to be executed.

15. (previously presented) A dynamic flow determination apparatus according to claim 10, wherein:

the flow control means stores a list of actions already executed, when the flow control means selects actions and

the flow control means excludes an action or actions which have been executed from actions to be ignited to thereby prevent the flow from forming an endless loop.

16. (previously presented) An apparatus for dynamically determining a flow by means of an action chain in event processing performed in a distributed system, the apparatus comprising:

action/attribute storage means for storing definition information regarding actions;

message reception means for receiving a message;

message transmission means for transmitting a message;

action management means for changing definition information regarding an action when the received message is a request for changing the definition information regarding the action;

pattern match processing means for comparing the contents of a parameter of a message which is received as an action execution request with the definition information stored in the action/attribute storage means in order to select matched actions;

action execution means for managing execution of the selected action; and

flow control means, which is started by the action execution means upon receipt of an event object, for selecting actions to be executed next in accordance with a type of the received event object and for creating a message that is an action execution request in which the address of the flow control unit is designated as a transmission destination address,

whereby the flow control means repeats selecting an action to be executed next in accordance with a type of the received event object.

17. (currently amended) A distributed system, comprising:

a dynamic flow determination apparatus which processes events cooperatively with one or more other apparatuses, wherein:

each apparatus keeps actions and attributes defined separately from the other apparatuses;

a dynamic flow of actions is determined through selection of actions corresponding to an

input event; and

when receiving ~~an~~ a second event object as the result of execution of ~~a selected~~ an action selected in accordance with a type of a first event object, a flow control unit selects actions another action to be next activated and executed from actions in an action/attribute storage in accordance with a type of the second event object and creates a message that is an action execution request in which the address of the flow control unit is designated as a transmission destination address.

18. (previously presented) The distributed system according to claim 17, wherein different input patterns are defined for an event, and each of the different input patterns corresponds to each of the different action of the event, thus the dynamic flow of actions for an event is determined.

19. (previously presented) The distributed system according to claim 17, wherein when an executed result of an action is returned, another action is determined through the input pattern of an event following the result of the action.

20. (previously presented) The distributed system according to claim 17, wherein an attribute value of the action is defined for an event, so that the chain in dynamic flow of the action is controlled through the definition.

21. (previously presented) The distributed system according to claim 17 wherein a name of an action which is expected to be executed before the action is listed, so that the dynamic flow of action is determined through referencing the action name in time of selection of the action.

22. (cancelled)

23. (cancelled)

24. (currently amended) A method of operating an action execution unit implemented in a data processing system, comprising:

~~receiving a first execution request having an event object; and~~

in response to receiving ~~the~~ a first execution request, starting a flow control unit that

selects a first action based on the first execution request and creates a message that is an action execution request in which the address of the flow control unit is designated as a transmission destination address; and

in response to receiving a second execution request, resulting from an execution of the first action, causing the flow control unit to select a second action based on the second execution request.

25. (currently amended) A method of operating a computer code execution module in a data processing system, comprising:

in response to receiving a first request to perform a function, creating a code selection unit that determines and provides first code based on the first function and that creates a message that includes a request to perform a function in which the address of the code selection unit is designated as a transmission destination address; and

executing the first code provided by the program code selection unit thereby generating a second request to perform a function; and

in response to receiving the second request to perform a function, causing the code selection unit to determine and provide second code based on the second function.